IN THE CLAIMS:

1-7. (Canceled)

8. (Original) A method of assaying the reactivity of a subject to IDDM autoantigen said method comprising contacting a peptid3e or chemical equivalent thereof comprising the formula:

$$X_1X_2X_3$$

wherein:

X_1 and X_3 may be the same or different and each is an amino acid sequence comprising from 0 to 40 naturally or non-naturally occurring amino acid residues; X_2 is any amino acid sequence of from 10 to 100 residues derived from, homologous to or contiguous within amino acids 506 to 518 inclusive or derivatives thereof of human GAD65 and/or amino acids 24 to 36 inclusive or derivatives thereof of human proinsulin; and wherein said peptide molecule is capable of reacting with T cells and modifying T-cell function when incubated with cells from subjects having pre-clinical or clinical Insulin-Dependent Diabetes Mellitus (IDDM) with cells from said subject and determining reactivity by an appropriate assay.

9. (Original) A method according to claim 8 wherein the cells are selected from the group comprising PBMCs, anti-coagulated whole blood and/or tissue biopsy cells.

10. (Previously presented) The method according to Claim 8 wherein an appropriate assay includes proliferation assay, cytotoxic assays, cellular reactivity or combinations thereof.

11. (Original) A method according to claim 8 wherein X_2 comprises from 10 to 50 amino acid residues.

12. (Original) A method according to claim 11 wherein X_2 comprises from 10 to 30 amino acid residues.

13. (Original) A method according to claim 12 wherein X_2 comprises from 10 to 15 amino acid residues.

14. (Currently amended) A method according to claim 8 or 9 or 10 or 11 or 12 wherein X_2 comprises the amino acid sequence: FFYTPKTRREAED (SEQ ID NO: 1).

15. (Currently amended) A method according to claim 8 or 9 or 10 or 11 or 12 wherein X_2 comprises the amino acid sequence: FWYIPPSLRTLED (SEQ ID NO: 2).

16. (Currently amended) A method of assaying the reactivity of a subject to DDM autoantigen said method comprising contacting a peptide or chemical equivalent thereof comprising the formula:

$$X_1X_2X_3$$

wherein:

X_1 and X_2 may be the same or different and each is an amino acid sequence comprising from 0 to 15 naturally or non-naturally occurring amino acid residues; X_2 is selected from FFYTPKTRREAED (SEQ ID NO: 1) and FWYIPPSLRTLED (SEQ ID NO: 2) or a derivative chemical equivalent thereof and wherein said peptide is capable of reacting with T cells and modifying T-cell function when incubated with cells from subjects with pre-clinical or clinical IDDM with cells from said and determining reactivity by an appropriate assay.

17. (Original) A method according to claim 16 wherein the cells are selected from the group comprising PBMCs, anti-coagulated whole blood and/or tissue biopsy cells.

18. (Original) A method according to claim 16 or 17 wherein an appropriate assay includes proliferation assay, cytotoxic assays, cellular reactivity or combination thereof.

19. (Previously presented) A composition comprising a peptide or chemical equivalent thereof comprising the formula:

$$X_1X_2X_3$$

wherein:

X_1 and X_3 may be the same or different and each is an amino acid sequence comprising from 0 to 40 naturally or non-naturally occurring amino acid residues; X_2 is any amino acid sequence of from 10 to 100 residues derived from, homologous to or contiguous within amino acids 506 to 518 inclusive or derivatives thereof of human GAD 65 or amino acids 24 to 36 inclusive or derivatives thereof of human proinsulin; and wherein said peptide molecule is capable of reacting with T cells and modifying T-cell function when incubated with cells from subjects having pre-clinical or clinical Insulin-Dependent Diabetes Mellitus (IDDM) to assay reactivity of a subject to IDDM autoantigen by contacting said peptide or its chemical equivalent to cells from said subject and determining reactivity by an appropriate assay.

20. (Previously presented) The composition according to claim 19 wherein the cells are selected from the group comprising PBMCs, anti-coagulated whole blood or tissue biopsy cells.

21. (Previously presented) The composition according to claim 19 wherein an appropriate assay includes proliferation assay, cytotoxic assays, cellular reactivity or combinations thereof.

22. (Previously presented) The composition according to claim 19 wherein X_2 comprises from 10 to 50 amino acid residues.

23. (Previously presented) The composition according to claim 22 wherein X_2 comprises from 10 to 30 amino acid residues.

24. (Previously presented) The composition according to claim 23 wherein X_2 comprises from 10 to 15 amino acid residues.

25. (Currently amended) The composition according to claim 24 wherein X_2 comprises the amino acid sequence: FFYTPKTRREAED (SEQ ID NO: 1).

26. (Currently amended) The composition according to claim 24 wherein X_2 comprises the amino acid sequence: FWYIPPSLRTLED (SEQ ID NO: 2).

27. (Currently Amended) A composition comprising a peptide of chemical equivalent thereof comprising the formula:

$$X_1X_2X_3$$

wherein:

X_1 and X_3 may be the same or different and each is an amino acid sequence comprising from 0 to 15 naturally or non-naturally occurring amino acid residues; X_2 is selected from FFYTPKTRREAED (SEQ ID NO: 1) and FWYIPPSLRTLED (SEQ ID NO: 2) or a derivative or chemical equivalent thereof and wherein said peptide is capable of reacting with T cells and modifying T-cell function when incubated with cells from subjects with pre-clinical or clinical IDDM to assay reactivity of a subject to IDDM autoantigen by contacting said peptide or its chemical equivalent with cells from said subject and determining reactivity by a proliferation assay.

28. (Previously presented) The composition according to claim 27 wherein the cells are selected from the group comprising PBMCs, anti-coagulated whole blood or tissue biopsy cells.

29. (Previously presented) The composition according to claim 27 wherein an appropriate assay includes proliferation assay, cytotoxic assays, cellular reactivity or combinations thereof.

30-36. (Canceled)

37. (Previously presented) The method according to claim 8 wherein X_2 consists of an amino acid sequence comprising SEQ ID NO:1.

38. (Previously presented) The method according to claim 8 wherein X_2 consists of an amino acid sequence comprising SEQ ID NO:2.

39. (Previously presented) The composition according to claim 19 wherein X_2 consists of an amino acid sequence comprising SEQ ID NO:1.

40. (Previously presented) The composition according to Claim 19 wherein X_2 consists of an amino acid sequence comprising SEQ ID NO:2.